

REMARKS

The Examiner has objected to claims 21 and 22. The Examiner has rejected claim 15 under 35 U.S.C. §112, First Paragraph. The Examiner has rejected claims 6 and 32 under 35 U.S.C. §112, Second Paragraph. Furthermore, the Examiner has rejected claims 1, 5, 6, 10, 11, 14 and 16-31 under 35 U.S.C. §103. In view of the above amendments to the specification, and the claims, the Applicants respectfully request the Examiner to reconsider the pending rejections. After entry of this amendment, claims 1, 2, 5 through 8, 12, 14 through 20 and 23-32 will remain pending in the current application.

The Objections

The Examiner has objected to claims 21 and 22 for substantially duplicating claims 17 and 18. Accordingly, claims 21 and 22 have been cancelled.

In addition, the Specification on page 2 has been amended to correct a small typographical error. No new matter has been added to the Specification.

The Section 112 First Paragraph Rejection

The Examiner has rejected claim 15 under 35 U.S.C. §112, First Paragraph. In the previous Office Action dated March 25, 2004, the Examiner rejected claim 15 because, “the applicant does not disclose the claimed client side O/E and E/O (claimed first O/E and second E/O) that convert to and from a plurality of client wavelengths.” The Applicant had amended claim 15 so that “said first O/E converter converts from a predetermined wavelength optical signal to an electronic signal.” The Applicant has further had amended claim 15 so that “said second E/O converter converts from an electronic signal to a predetermined wavelength optical signal.” Support for this amendment can be found on page 7, lines 20-22 of the Applicant’s Specification.

The Examiner in the currently pending Office Action dated September 20 states that the specification does not support “the claimed client side O/E and E/O (claimed second O/E and first E/O) that convert an electrical signal to and from an optical signal with different wavelengths.” As supported at the lines 21 and 22 on page 7, “[i]n an alternative embodiment, these O/E and E/O converters are variable with respect to a wavelength.” Thus, there is sufficient disclosure to support the claimed invention at an enabling level for one of ordinary skill in the relevant art.

In previously amended claim 15, the first O/E and the second E/O now convert to and from a predetermined wavelength optical signal. Thus, Applicant respectfully submits that the above explanation overcomes the rejection under 35 U.S.C. §112, First Paragraph and requests that the rejection be removed.

The Section 112 Second Paragraph Rejection

The Examiner has rejected claims 6 and 32 under 35 U.S.C. §112, Second Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 6, the Examiner has pointed out that the limitation, “said test signal generator” lacks proper antecedent basis. Accordingly, claim 6 has been amended to recite “said signal testing unit” in lieu of “said test signal generator.” Similarly, in claim 32, the Examiner has pointed out that the limitation, “the selected optical signals” lacks proper antecedent basis. Accordingly, claim 32 has been amended to recite “the selected demultiplexed optical signals” in lieu of “the selected optical signals.” Thus, Applicant respectfully submits that the above explanation overcomes the rejection under 35 U.S.C. §112, Second Paragraph and requests that the rejection be removed.

The Section 103 Rejections

Claims 1, 5, 6, 10, 11, 14 and 16-31 have been rejected under 35 U.S.C. §103(a) as being obvious over U.S. Published Patent Application No. 2003/0147585 (hereinafter “Kikuchi”) in view of U.S. Patent No. 6,480,308 (hereinafter “Yoshida”). The Applicant respectfully submits that neither Kikuchi nor Yoshida discloses or teaches every limitation of newly amended independent claims 1, 6, 16, and 27.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 265 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Independent claims 1, 6 and 16 have been further amended to now explicitly recite the limitation of “an ‘all 1s and all 0s’ generator,” “a scrambler circuit,” “a descrambler,” “a selector circuit,” and “a comparison test circuit” in addition to the previously amended limitation of “a clock generator” and “a clock extraction circuit.” Similarly, independent method claim 27 has been further amended to now explicitly recite the limitation of “scrambling the electrical signal,” “descrambling the scrambled signal” and “selecting one of the descrambled signals.” Support for these amendments can be found on page 10, lines 1-10 and page 9, lines 4-24 of the Applicant’s Specification.

Kikuchi discloses having an optical receiver for receiving high-speed optical information signals and converting the high-speed optical information signals to electrical signals. Kikuchi further discloses a fault recovery mechanism and intra-site circuit error correction/monitoring mechanism. See paragraphs 0121 and 0122. As referred by Kikuchi, the fault recovery mechanism in FIG. 18 is identical to that is shown with respect to FIG. 17. As described in paragraphs 118 and 119, the "fault situation is detected from header information 238." As the Office Action notes, Kikuchi does not disclose utilizing "a test signal" in order to determine optical transmission quality. Applicant still argues that Kikuchi further does not disclose newly amended features of having "a clock generator" or "a clock extraction circuit" as argued in the previously submitted response to an Office Action dated March 25, 2004.

Yoshida discloses an optical communication apparatus. Yoshida further discloses a power control circuit unit 2 provided with a timer circuit 18, a selector 17, a control circuit 10, and a test pattern generating circuit 16. See col. 8, lines 33-35. A test pattern signal s16a is outputted from the test pattern generating circuit 16 and is transmitted to the opposed first optical communication apparatus 20 via the selector 17 and via the selector 1. See col. 9, lines 1-4. The test pattern signal s16a is a test signal having a specific signal pattern. See col. 9, line 5. Test pattern signal s9a is used for determining light emitting power. See col. 8, lines 55-59. When there is a discrepancy between the test signal and a transmitted signal, the system adjusts the intensity of the optical signal. See Abstract; also see col. 10, line 42-col. 11, line 7.

As the Examiner has indicated the allowable subject matter in claim 4 in the pending Office Action, each of independent claims 1, 6, 16 and 27 has been amended to incorporate all of the allowable subject matter limitations of claim 4 and its intervening claim 3. Because of the incorporated allowable subject matter, Applicant respectfully submits that the independent claims 1, 6, 16 and 27 are now allowable.

After cancellation of claims 3, 4, 9, 10, 11, 13, 21 and 22, dependent claims 2, 5, 7, 8, 12, 14, 15, 17 through 20, 23-26 and 28 through 32 ultimately depend upon one of the newly amended independent claim 1, 6, 16 or 27 and incorporate the allowable subject matter. Therefore, Applicant respectfully submits that the pending rejections under 35 U.S.C. §103(a) should be withdrawn.

Conclusion

In view of the above remarks and amendments, Applicant respectfully submits that all of the pending claims are in condition for allowance and respectfully request a favorable Office Action so indicating.

Respectfully submitted,



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